

FORM-PTO-1390 (Rev. 12-29-99)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371			032498-009
			U.S. APPLICATION NO. (If known, see 37 C.F.R. 1.5) 09/831640
INTERNATIONAL APPLICATION NO. PCT/IB99/01821	INTERNATIONAL FILING DATE 11 November 1999	PRIORITY DATE CLAIMED 12 November 1998	
TITLE OF INVENTION CONTAINER WITH A CLOSURE THAT CAN BE PRESSURE-RELEASED			
APPLICANT(S) FOR DO/EO/US ROLAND DURNER AND MATTHIAS GIETENBRUCH			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371. 2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371. 3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and the PCT Articles 22 and 39(1). <input type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) a. <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> has been transmitted by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). 6. <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)). <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) a. <input checked="" type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> have been transmitted by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input type="checkbox"/> have not been made and will not be made. 8. <input checked="" type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). 10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). Items 11. to 16. below concern other document(s) or information included: 11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98. 12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 13. <input type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment. 14. <input type="checkbox"/> A substitute specification. 15. <input type="checkbox"/> A change of power of attorney and/or address letter. 16. <input type="checkbox"/> Other items or information:			
Copy of PCT Application WO 00/29113; copy of PCT/IPEA/409			

U.S. APPLICATION NO. (if known) / see 37 CFR 1.507

097/831640

INTERNATIONAL APPLICATION NO.
PCT/IB99/01821ATTORNEY'S DOCKET NUMBER
032498-00917. ☐ The following fees are submitted:

CALCULATIONS

PTO USE ONLY

Basic National Fee (37 CFR 1.492(a)(1)-(5)):

Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1,000.00 (960)

International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$860.00 (970)

International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$710.00 (958)

International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$690.00 (956)

International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 (962)

ENTER APPROPRIATE BASIC FEE AMOUNT =

\$860.00

Surcharge of \$130.00 (154) for furnishing the oath or declaration later than months from the earliest claimed priority date (37 CFR 1.492(e)).

20 ☐ 30 ☐

\$

Claims	Number Filed	Number Extra	Rate
Total Claims	19 -20 =		X\$18.00 (966)
Independent Claims	1 -3 =		X\$80.00 (964)
Multiple dependent claim(s) (if applicable)			+ \$270.00 (968)
TOTAL OF ABOVE CALCULATIONS =			\$860.00
Reduction for 1/2 for filing by small entity, if applicable (see below).			\$
SUBTOTAL =			\$860.00
Processing fee of \$130.00 (156) for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.492(f)).			\$
TOTAL NATIONAL FEE =			\$860.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 (581) per property +			\$
TOTAL FEES ENCLOSED =			\$860.00
			Amount to be: refunded \$
			charged \$

Number Filed

Number Extra

Rate

Total Claims

19 -20 =

X\$18.00 (966)

\$

Independent Claims

1 -3 =

X\$80.00 (964)

\$

Multiple dependent claim(s) (if applicable)

+ \$270.00 (968)

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TOTAL OF ABOVE CALCULATIONS =

\$860.00

Reduction for 1/2 for filing by small entity, if applicable (see below).

\$

SUBTOTAL =

\$860.00

Processing fee of \$130.00 (156) for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.492(f)).

20 ☐ 30 ☐

\$

+

TOTAL NATIONAL FEE =

\$860.00

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 (581) per property +

\$

TOTAL FEES ENCLOSED =

\$860.00

Amount to be:
refunded

\$

charged

\$

a. ☐ Small entity status is hereby claimed.b. ☒ A check in the amount of \$ 860.00 to cover the above fees is enclosed.c. ☐ Please charge my Deposit Account No. 02-4800 in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.d. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-4800. A duplicate copy of this sheet is enclosed.**NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.**

SEND ALL CORRESPONDENCE TO:

Patrick C. Keane
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

SIGNATURE

Patrick C. Keane

NAME

May 11, 2001

32,858

REGISTRATION NUMBER

PROCT Rec'd 20 JUL 2001

#3

Patent
Attorney's Docket No. 032498-009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
Roland DURNER et al.) Group Art Unit: Unassigned
Application No.: 09/831,640) Examiner: Unassigned
Filed: November 11, 1999)
For: CONTAINER FOR LABORATORY)
DEVICES (As Amended))

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir or Madam:

Please amend the above-identified application as follows.

IN THE TITLE:

Please change the title of the application from "CONTAINER WITH A CLOSURE
THAT CAN BE PRESSURE-RELEASED to --CONTAINER FOR LABORATORY
DEVICES--.

IN THE ABSTRACT:

Please amend the title of the abstract as follows:

*Please change "Summary Container with a locking device that is releasable by
push-down action" to --Abstract of the Disclosure--.*

09831640-072001

IN THE SPECIFICATION:

Please amend the specification as follows:

Kindly replace the paragraph beginning at page 1, line 1 with the following:

--CONTAINER FOR LABORATORY DEVICES--

Kindly replace the paragraph beginning at page 1, line 5 with the following:

--BACKGROUND OF THE INVENTION--

Kindly replace the paragraph beginning at page 7, line 24 with the following:

--The invention relates to a storage container for laboratory devices, with a storage compartment accessible from above through an opening. The container has walls surrounding the storage compartment and a lid to close the storage compartment. The lid has a locking device that can be released by a push action. The locking device has a lever that is pivoted on a fulcrum axle, with a catch element on the lever designed to engage a detent on one of the container walls. When a pushing force is applied to a delimited area of the locking device, the pushing force is transmitted to the lever. This causes the lever to retract and disengage the catch element from the detent so that the lid becomes unlocked. The term "laboratory devices" as used in this context is to be taken in its most general sense, encompassing cuvettes, test tubes, pipette tips, as well as drill bits for dental drills, etc. Such equipment on the one hand has to be stored in relatively tightly sealed enclosures, but it should on the other hand be easily accessible under the special conditions of a laboratory or similar environment. The special conditions entail that an operator often

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has only one hand available to open the container - called a box by laboratory personnel - to gain access to the contents. For example, one hand may be used to hold the pipette that is to be fitted with a tip out of the box. In addition, such containers or boxes often have a relatively small footprint are while being relatively tall to accommodate the upright storage of the laboratory instruments that they are designed to hold, so that they are not very stable.--

Kindly insert the following paragraph between paragraphs ending at page 1, line 24, and beginning at line 26 with the following:

--OBJECT OF SUMMARY OF THE INVENTION--

Kindly replace the paragraph beginning at page 1, line 26, with the following:

--The invention therefore has the objective of making a box of the type described above easier to use in spite of a possibly unstable condition, while still satisfying all of the requirements that such a box has to meet, in particular that the box be designed for one-handed opening and closing.--

Kindly replace the paragraph beginning at page 1, line 33, and ending at page 2, line 12 with the following:

--According to the invention, the objective given above is met by a container which, in addition to the features described above under "Background of the Invention", has the distinctive advantage that the lid is locked to a wall of the container by pushing down in the

same direction as for releasing the lock, but applying the pushing force to a different area, i.e., outside the delimited area that is used to release the lock. The rationale is that pushing down on the box from above is generally associated with a force against the fixed support surface on which the box is resting, so that the risk of tipping over or sliding is of no concern. By designing the locking device so that it locks as well as unlocks the box by pushing down, the one-handed operation is indeed assured. For user-friendliness in a laboratory environment, it is advantageous if the locking device has a lever pivoted on a hinge and connected to a catch element that engages a matching detent on at least one of the walls. This is the simplest way of realizing a concept of one-handed push-action.--

Kindly insert the following between the paragraphs ending at page 5, line 9, and beginning at line 11 as follows:

--BRIEF DESCRIPTION OF THE DRAWINGS--

Kindly insert the following between the paragraphs ending at page 6, line 9, and beginning at line 11 as follows:

--DESCRIPTION OF PREFERRED EMBODIMENTS--

Kindly replace the paragraph beginning at page 15, line 1, with the following:

--WHAT IS CLAIMED IS:--

IN THE CLAIMS:

Kindly replace claims 1-18 with the following:

1. (Amended) A container for storing a plurality of laboratory devices, with a storage compartment accessible from above through an opening; walls surrounding said storage compartment, at least one of said walls having a detent; a lid to close the storage compartment; and a locking device releasable by a push action and operable to lock and unlock the lid, said locking device comprising a lever that is pivoted on a fulcrum axle on the lid and has a catch element adapted to engage said detent, said locking device further comprising a delimited area adapted to receive a first pushing force and to transmit the first pushing force to the lever, thereby causing the lever to retract and disengage the catch element from the detent so that the lid becomes unlocked from said at least one wall, wherein the lever is operable to be moved into a locking position and thereby to effect a locked engagement between said at least one wall and the lid when a second pushing force is applied to at least one of the locking device and the lid in the same direction as the first pushing force and outside of the delimited area.

2. (Amended) The container according to claim 1, wherein the lever is a two-armed lever pivotally supported in a border area of the lid, and wherein one of the arms carries the catch element and the other arm serves to directly transmit the first pushing force to the lever.

3. (Amended) The container according to claim 2, wherein said other arm extends above the lid and constitutes the delimited area.

4. (Amended) The container according to claim 1, wherein the locking device is arranged in a centered position.

5. (Amended) The container of claim 1, wherein the locking device comprises a first elastic element to bias the lever towards a position where the catch element engages the detent.

6. (Amended) The container according to claim 5, wherein the first elastic element is a leaf spring connected to the lid.

7. (Amended) The container according to claim 6, wherein the leaf spring is formed as a flat portion out of the lid, hanging together with a main portion of the lid through a material connection of reduced thickness.

8. (Amended) The container according to claim 7, wherein the lever is arranged at an exterior side of the container and is wide enough to cover at least part of the leaf spring and a gap between the leaf spring and the main portion of the lid.

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9. (Amended) The container according to claim 1, comprising at least one second elastic element to pop the lid at least partially open when the first pushing force is applied to the locking element.

10. (Amended) The container according to claim 1, wherein the lid is connected through a hinge device to one of the walls.

11. (Amended) The container according to claim 9, wherein the lid is connected through a hinge device to one of the walls and the second elastic element is arranged on an opposite side of the lid in relation to the hinge device.

12. (Amended) The container according to claim 11, wherein the second elastic element is arranged at a substantially centered location on said opposite side.

13. (Amended) The container according to claim 9, wherein the second elastic element is constituted by a leaf spring and the lid has at least one seating slot to hold the leaf spring.

14. (Amended) The container according to claim 1, comprising a sealing arrangement between the opening and the lid.

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15. (Amended) The container according to claim 14, wherein the sealing arrangement comprises rims on the lid and on the walls around the opening and said rims overlap each other in the manner of labyrinth baffles.

16. (Amended) The container according to claim 1, comprising a carrier divided into compartments for each of the laboratory devices and designed to be set into the opening, and at least one additional locking device arranged at the opening to lock the carrier in place in the opening.

17. (Amended) The container according to claim 1, wherein at least parts of the lid and the walls consist of a heat-resistance polymer material.

18. (Amended) The container according to claim 17, wherein the heat-resistant polymer material is selected from the group consisting of polycarbonates and polysulfonates.

Kindly add the following new claim 19 as follows:

--19. (New) The container according to claim 1, wherein the lid and a bottom of the container have recesses and projections of complementary shape adapted for secure stacking of two or more containers on top of each other.--

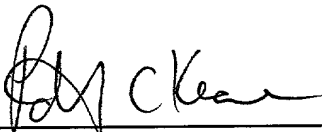
REMARKS

Claims 1-19 are now pending in the application. The amendments were made to place the application in a more suitable form prior to examination. Favorable consideration is respectfully requested.

A document entitled "Translation of amended claim 1 of PCT Application M449-P WO" was submitted to the U.S. Patent and Trademark Office along with the filing of the present application on May 11, 2001. This document is an annex to the International Preliminary Examination Report and includes an amended claim 1; however, the Notification of Missing Requirements mailed on June 13, 2001, indicated that this amendment was not entered. Although it is believed that this amended claim 1 should have been entered, amendments are proposed herewith to claim 1 in its original form.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 
Patrick C. Keane
Registration No. 32,858

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

Date: July 19, 2001

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Attachment to Preliminary Amendment dated July 18, 2001

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Page 1, Paragraph Beginning at Line 1

[Translation of PCT Application M449-P WO, Original Version]

CONTAINER FOR LABORATORY DEVICES

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Page 1, Paragraph Beginning at Line 5

[Description] **BACKGROUND OF THE INVENTION**

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Page 1, Paragraph Beginning at Line 7 through Line 24

[The invention relates to a container according to the generic subject of claim 1.]

The invention relates to a storage container for laboratory devices, with a storage compartment accessible from above through an opening. The container has walls surrounding the storage compartment and a lid to close the storage compartment. The lid has a locking device that can be released by a push action. The locking device has a lever that is pivoted on a fulcrum axle, with a catch element on the lever designed to engage a detent on one of the container walls. When a pushing force is applied to a delimited area of the locking device, the pushing force is transmitted to the lever. This causes the lever to retract and disengage the catch element from the detent so that the lid becomes unlocked.

The term "laboratory devices" as used in this context is to be taken in its most general sense, encompassing cuvettes, test tubes, pipette tips, as well as drill bits for dental drills, etc. Such equipment on the one hand has to be stored in relatively tightly sealed enclosures, but it should on the other hand be easily accessible under the special conditions of a laboratory or similar environment. The special conditions entail that an operator often has only one hand available to open the container - called a box by laboratory personnel - to gain access to the contents. For example, one hand may be used to hold the pipette that is to be fitted with a tip out of the box. In addition, such containers or boxes often have a relatively small footprint are while being relatively tall to accommodate the upright storage

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of the laboratory instruments that they are designed to hold, so that they are not very
stable.

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Page 1, Between Paragraphs Ending at Line 24 and Beginning at Line 25

OBJECT OF SUMMARY OF THE INVENTION

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Page 1, Paragraph Beginning at Line 26 through Line 31

The invention therefore has the objective of making a box of the type described above easier to use in spite of a possibly unstable condition, while still satisfying all of the requirements that such a box has to meet, in particular that the box be designed for one-handed opening and closing.

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Page 1, Paragraph Beginning at Line 33 through Page 2, Ending at Line 12

According to the invention, the objective given above is met by a container [with the characterizing features of] which, in addition to the features described above under “Background of the Invention”, has the distinctive advantage that the lid is locked to a wall of the container by pushing down in the same direction as for releasing the lock, but applying the pushing force to a different area, i.e., outside the delimited area that is used to release the lock. The rationale is that pushing down on the box from above is generally associated with a force against the fixed support surface on which the box is resting, so that the risk of tipping over or sliding is of no concern. By designing the locking device so that it locks as well as unlocks the box by pushing down, the one-handed operation is indeed assured. For user-friendliness in a laboratory environment, it is advantageous if the locking device has a lever pivoted on a hinge and connected to a catch element that engages a matching detent on at least one of the walls. This is the simplest way of realizing a concept of one-handed push-action.

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Page 5, Between the Paragraph Ending at Line 9 and Beginning at Line 11

BRIEF DESCRIPTION OF THE DRAWINGS

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Page 6, Paragraph Ending at Line 9 and Beginning at Line 11

DESCRIPTION OF PREFERRED EMBODIMENTS

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Page 15, Paragraph Beginning at Line 1

[Patent Claims] WHAT IS CLAIMED IS:

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Marked-up Claims 1-18

[Patent Claims]

1. [Container (1)] A container for storing a plurality of laboratory devices [(2) comprising], with a storage compartment [surrounded by walls (7, 8, 10, 11) and] accessible from above through an opening [(1a), a lid]; walls surrounding said storage compartment, at least one of said walls having a detent; a lid [(14)] to close the storage compartment[, as wells as]; and a locking device [(15)] releasable by a push action and operable to lock [the lid (14) to at least one of the walls (10); characterized in that the locking device (15) comprises a lever (16) pivoted on a fulcrum axle (17) and connected to a catch element (20) that engages a detent (19) on at least one of the walls (10), the locking device having a delimited area (21, 21b, 31a) from where an applied pushing force is transmitted to the lever (10) which, as a result of said force, is transmitted to the lever (16) which, as a result of said force, directly unlocks the lid (14) from the wall (10); and further characterized in that a pushing force applied in the same direction in an area adjacent to the delimited area (21, 21b, 31a) and possibly extending beyond the locking device (15) over the lid (14) will indirectly cause the lever (16) to be moved in the locking position and will thereby effect a locked engagement between the wall (10) and the lid (14)] and unlock the lid, said locking device comprising a lever that is pivoted on a fulcrum axle on the lid and has a catch element adapted to engage said detent, said locking device further comprising a delimited area adapted to receive a first pushing force and to transmit the first pushing force to the lever, thereby causing the lever to retract and disengage the catch element from

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Marked-up Claims 1-18

the detent so that the lid becomes unlocked from said at least one wall, wherein the lever is operable to be moved into a locking position and thereby to effect a locked engagement between said at least one wall and the lid when a second pushing force is applied to at least one of the locking device and the lid in the same direction as the first pushing force and outside of the delimited area.

2. [Container] The container according to claim 1, [characterized in that] wherein the lever [(10)] is [configured as] a two-armed lever pivotally supported in [the] a border area of the lid, and wherein one of the arms [carrying] carries the catch element [(20)] and the other arm [(21, 21c) serving] serves to directly transmit the [applied] first pushing force to the lever [(16)].

3. [Container] The container according to claim 2, [characterized in that the] wherein said other arm [of the two-armed lever] extends above the lid [(14)] and [forms] constitutes the delimited area [functioning as a push lever (21)].

4. [Container] The container according to claim 1, [characterized in that] wherein the locking device [(15)] is arranged in a centered position[, particularly at the lide (14)].

Attachment to Preliminary Amendment dated July 18, 2001

Marked-up Claims 1-18

5. The container of claim 1, wherein the locking device comprises a first elastic element to bias the lever towards a position where the catch element engages the detent.

[Container of claim 1, characterized in that the lever (16) is force-biased by an elastic element (22, 22a, 22b) in the direction of engagement of the two catch-lock elements (19, 20).]

6. [Container] The container according to claim 5, [characterized in that the] wherein the first elastic element is a leaf spring [(22, 22b)] connected to the lid [(14)].

7. [Container] The container according to claim 6, [characterized in that] wherein the leaf spring [(22)] is formed as a flat portion out of the lid [(material)], hanging together with a main portion of the lid [(14)] through a material connection [(23)] of reduced thickness.

8. [Container] The container according to claim 7, [characterized in that the leaf spring (22) and the remaining gap against the rest of the lid are at least partially covered on the outside by a lever (16, 21) of approximately wide dimensions] wherein the lever is arranged at an exterior side of the container and is wide enough to cover at least part of the leaf spring and a gap between the leaf spring and the main portion of the lid.

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Attachment to Preliminary Amendment dated July 18, 2001

Marked-up Claims 1-18

9. [Container] The container according to claim 1, [characterizing in that] comprising at least one second elastic element [(29) is provided] to pop the lid [(14)] at least partially open when the first pushing [on] force is applied to the locking element [(15, 15a)].

10. [Container] The container according to claim 1, [characterized in that] wherein the lid [(14)] is connected through a hinge device [(25-27, 25'-27')] to one of the walls [(11)].

11. [Container] The container according to claim 9, wherein the lid is connected through a hinge device to one of the walls and the second elastic element is arranged on an [and claim 10, characterized in that the element (20) is arranged in an area on the] opposite side of the lid [(14)] in relation to the hinge device [(25-27, 25'-27')].

12. [Container] The container according to claim 11, [characterized in that the] wherein the second elastic element [(29)] is arranged at a substantially centered location [opposite the hinge device (25-27, 25'-27)] on said opposite side.

13. [Container] The container according to claim 9, [characterized in that the] wherein the second elastic element is constituted by a leaf spring and the lid [(14)] has at

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Attachment to Preliminary Amendment dated July 18, 2001

Marked-up Claims 1-18

least one seating slot [(30) t hold a leaf spring that forms at least part of the elastic element (29)] to hold the leaf spring.

14. [Container] The container according to claim 1, [characterized in that] comprising a sealing arrangement [is provided] between the opening [(1a) of the storage compartment at the lid (14)] and the lid.

15. [Container] The container according to claim 14, [characterized in that] wherein the sealing arrangement [is configured at least in part with rims (10a, 14b) that] comprises rims on the lid and on the walls around the opening and said rims overlap each other in the manner of labyrinth baffles [on the lid (14) and on the walls (7, 10, 11) delimiting the access opening (1a)].

16. [Container] The container according to claim 1, [characterized in that at least one locking device (6, 6a) is provided in the area of the access opening (1a) to lock a carrier (3, 3') that is] comprising a carrier divided into compartments for each of the laboratory devices and designed to be set into the [storage compartment and is divided into compartments for each of the laboratory devices (2)] opening, and at least one additional locking device arranged at the opening to lock the carrier in place in the opening.

17. [Container] The container according to claim 1, [characterized in that] wherein at least parts of the lid [(14)] and the walls [(7, 8, 10, 11)] consist of a heat-resistance polymer material[, in particular a polycarbonate or a polysulfonate].

18. [Container according to claim 1, characterized in that two opposite walls, in particular a wall (8) and the lid (14) have recesses (13) and projections (12) of complementary shape adapted for secure stacking of two or more containers (1) on top of each other] The container according to claim 17, wherein the heat resistant polymer material is selected from the group consisting of polycarbonates and polysulfonates.

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T00340-049T050

Translation of PCT Application M449-P WO, Original Version

5 Description

10 The invention relates to a container according to the
generic subject of claim 1. The term "laboratory devices"
as used in this context is to be taken in its most general
sense, encompassing cuvettes, test tubes, pipette tips, as
well as drill bits for dental drills, etc. Such equipment
on the one hand has to be stored in relatively tightly
sealed enclosures, but it should on the other hand be
easily accessible under the special conditions of a
15 laboratory or similar environment. The special conditions
entail that an operator often has only one hand available
to open the container - called a box by laboratory
personnel - to gain access to the contents. For example,
one hand may be used to hold a pipette that is to be fitted
20 with a tip out of the box. In addition, such containers or
boxes often have a relatively small footprint area while
being relatively tall to accommodate the upright storage of
the laboratory instruments that they are designed to hold,
so that they are not very stable.

25 The invention therefore has the objective of making a box
of the type described above easier to use in spite of a
possibly unstable condition while still satisfying all of
the requirements that such a box has to meet, in particular
30 that the box be designed for one-handed opening and
closing.

According to the invention, the objective given above is
met by a container with the characterizing features of

claim 1. The rationale is that pushing down on the box from above is generally associated with a force against the fixed support surface on which the box is resting, so that the risk of tipping over or sliding is of no concern. By designing the locking device so that it locks as well as unlocks the box by pushing down, the one-handed operation is indeed assured. For user-friendliness in a laboratory environment, it is advantageous if the locking device has a lever pivoted on a hinge and connected to a catch element that engages a matching detent on at least one of the walls. This is the simplest way of realizing a concept of one-handed push-action.

In a preferred embodiment, the locking device has a two-armed lever, of which one arm represents the locking catch lever while the other arm extends above the cover as a push lever representing the defined area where pushing down will unlock the box.

A more secure closure is achieved by using an elastic element to force-bias the lever in the direction of mutual engagement between the catch element and the detent to prevent the risk of an accidental release that may be caused by jolts, vibrations and other reasons.

Furthermore, with the help of the force-biased elastic element, the locking device will snap securely into engagement by pressing down on the top or lid outside of the defined area. As a consequence, a somewhat greater push-down effort will be required to reopen the box, but users subjectively find this to be more of a favorable trait rather than a drawback.

The ease of using the box is further enhanced by at least one elastic element that at least partially pops up the lid

when the locking device is released by applying a push-down force. Thus, the push-down operation not only releases the locking device but also opens the lid.

5 Lids that can be put on a box, canister or other container are known per se. If this kind of a lid were to be used, one would need to take special measures to ensure that the lid would open and close simultaneously on all sides, which always includes the danger that the lid could get stuck. 10 It is therefore preferred - although not unknown - to connect the lid to one of the walls through a hinge device.

If a hinge device between the lid and a wall is to be used together with the aforementioned elastic element, it would 15 be conceivable to arrange at least one elastic element near the hinge device so that, when the locking device is released, the lid will pop up with a jolt, because the elastic element needs to be very strong to act through the short lever arm on the lid. As has already been mentioned 20 above, boxes of this kind can be relatively unstable, and a jolt would therefore be undesirable. Consequently, it is preferred to arrange the elastic element and the hinge device at opposite sides of the lid.

25 The elastic element could also be arranged on the two sides flanking the hinge device, but from a manufacturing point of view, a more favorable location for the elastic element is at the center of the side opposite the hinge device.

30 Especially for a container intended for the aforementioned purpose, it will be advantageous in many applications if there is a seal arranged between the access opening to the storage compartment and the lid. This can be achieved at least in part in an essentially known manner if the lid and

the rim of the walls around the access opening have overlapping baffles in the manner of a labyrinth trap. Of course, other solutions are also conceivable, for example an elastic sealing element such as a sheet of rubber that fits over the rim of a carrier bin, container, tray or basket and is pressed down tightly when the lid is locked into position. However, the labyrinth baffle is preferable because in many cases it may be desirable to use heat for disinfecting or sterilizing the box, in which case it would be in most cases unsuitable to use elastic sealing elements of the kind just mentioned.

For applications where disinfecting or sterilizing is a factor to be considered, it is advantageous to provide at least one locking device in the area of the access opening to secure a tray, basket, or similar receptacle that has compartments for individual laboratory instruments and fits into the storage compartment as an insert. With this arrangement, all of the instruments can be lifted out of the box together and placed into a disinfecting apparatus or into a processing stage for analyzing or mixing the samples in the tray, whereby the cleaning of the box is simplified.

To accomplish the purposes just mentioned, it is further of practical advantage if the lid and the walls consist of a heat-resistant polymer, such as a polycarbonate, capable of withstanding temperatures of up to 200°C.

As mentioned above, boxes of the kind described herein can in some cases be unstable while, on the other hand, it may be desirable to store a plurality of boxes in a compact space. To make the boxes stay more firmly in place, it is preferred if two opposite walls of each box, particularly

the lid and the floor, have complementary projections and recesses that allow neighboring boxes to be securely stacked. Conceivably, an arrangement of complementary projections and recesses could also be provided on the side walls, but this might require interlocking tooth profiles in order to achieve a firm mutual hold between the boxes. This would increase the complexity of the manufacturing process, which is why the aforementioned configuration of the lid and the bottom of the box is preferred.

Further details of the invention will become evident from the following description of an embodiment that is given as an example and is schematically illustrated in the drawing, wherein

Fig. 1 represents a perspective view of a box according to the invention;

Fig. 2 represents a cross-sectional view in a vertical plane along the line II-II of Fig. 1, in which the intermediate walls of the carrier bin or basket have been omitted;

Fig. 2A represents a further cross-sectional view of the box;

Fig. 3 represents a frontal view looking at the lid and the locking device of the box in the viewing direction indicated by the arrow III of Figures 1 and 2;

Figures 4A and 4B represent a further example of an embodiment of a locking device according to the invention, where Fig. 4A gives a fragmentary

sectional view of the locking device portion corresponding roughly to Fig. 2, while Fig. 4B represent a fragmentary perspective view drawn to a larger scale to visualize the function of the locking device; and

Fig. 5 represents a sectional view analogous to Fig. 4A, for a third example of an embodiment of the invention.

Fig. 1 illustrates a container 1 - also referred to as a box - to hold small laboratory devices such as pipette tips 2, that are accommodated in a carrier 3, a bin or basket with dividing walls 4 forming small individual compartments, each of which can hold a single pipette tip 2. The bin or basket consists of a polymer material such as a heat-compatible polycarbonate or polysulfonate and has on both sides an integrally formed resilient flap 5 with an outward-facing catch 6. When the bin or basket 3 is positioned in the box 1, the catch 6 locks behind a detent 6a (shown in Fig. 2) on the inside of the side wall 7 and thereby connects the bin or basket securely, but releasably (by pushing the catch elements 5 inwards) to the box 1. The use of a heat-resistant polymer material is particularly important if the bin or basket is a so-called tray, in this case a carrier 3 for pipette tips, which is normally placed into a disinfecting apparatus together with its contents. It can furthermore be advantageous if the box 1, too, or at least a part of the box that is exposed to a heat treatment for disinfecting or sterilizing, is made of a heat-resistant polymer material such as a polycarbonate or a poly-sulfonate. These types of polymers will generally withstand temperatures of about 200°C without damage.

As shown in Fig. 2, it may be advantageous if the carrier 3 is spaced apart from a bottom wall 8 of the box 1. This can be accomplished through a resting pad 9 supporting the carrier 3. The resting pad 9 is preferably configured as two ledges arranged at opposite walls of the box, i.e., at the front wall 10 and rear wall 11. However, the resting pad could also consist of at least one projection or elevated pad in the floor 8, for example distributed over the floor area. In any case, the carrier 3 is thus substantially immobilized in the box 1, i.e., by the locked connection 6, 6a at the top and by the resting pad 9 at the bottom.

With a tray 3' that is plate-shaped rather than basket-shaped, the box can have an arrangement of ridges 9a projecting from the inside surfaces of the walls, so that the tray 3' rests on the top ends 9b of the ridges, as shown in Fig. 2A. The ridges 9a can be integrally formed on the interior wall surfaces.

As Fig. 1 further illustrates, the box 1 has at least three feet, in the illustrated case actually four feet 12 (only three of which are in view), as well as recesses 13 in the lid 14. The recesses 13 are shaped to receive the feet 12 of another box that may be placed on top of the lid 14, so that stacks of boxes 1 can be formed.

It is often essential for laboratory devices that they can be enclosed under seal inside the box 1. To meet this requirement, a preferably elastic sealing material can be arranged at the bottom surface 14a of the lid (Fig. 2), so that the sealing material abuts at least the top of the rim 3a of the bin 3, but it could also be shaped as a flat

sealing plate extending substantially over the entire surface 14a. However, it is less complicated and generally adequate if a labyrinth baffle is formed between the lid 14 and the walls 7, 10 and 11. This can be achieved by designing the rims to overlap as illustrated in Fig. 2, where a rim 14b of the lid and a rim 10a of the wall are shown. As Fig. 1 illustrates, the overlapping rims continue also along the top edges of the side walls 7. Additional measures for sealing the remaining gaps will become evident from the description below, where the locking device is described.

The locking device 15 shown in Figures 1 to 3 has a catch lever 16 that is arranged to swivel on a pivot axle 17, the latter being shown in Figures 2 and 3. The pivot axis is appropriately defined by bearing cheeks 18 (Fig. 2) which can be integrally formed on the catch lever 16. The catch lever 16 has at its free end a catch 20 (Fig. 2) facing towards the front wall 10 of the box where a detent 19 is located. Of course, the same purpose could also be served by a recess or opening in the wall 10 instead of the projecting detent 19. However, an opening would have to be sealed, which is why a projecting detent is the preferred choice. For the same reason, it is preferable to arrange the catch 20 on a lever 16 of the locking device 15, although it could also be put on the side of the wall 10.

In view of the particular conditions of a laboratory operation, it is advantageous if the locking device 15 is designed so that it can be closed as well as opened by pushing down with one hand. To appreciate the merits of this concept, one only has to think of an operator holding in one hand a pipette or a dental drill while trying to

take a pipette tip or a drill bit out of the box with the other hand.

To facilitate the one-handed operation, the preferred concept according to the invention is to add a push-handle lever 21 to the catch lever 16, so that the parts 16 and 21 form an angled lever that tips about the pivot axis 17. As shown in Fig. 2, the push-handle 21 is operated against the force of a leaf spring 22 which, in a preferred embodiment, is integrally formed out of the material of the lid 14 as a flat portion that is connected to the main part of the lid through a thinned-down portion 23 (i.e., a straight, narrow area where the polymer material is weakened, in this case by a groove). To reduce friction, the push handle 21 is resting against the leaf spring 22 only through a projection 21a. The leaf spring 22 pushes the handle 21 in a clockwise direction (in reference to Fig. 2), so that the lever arm 16 with the catch 20 curving against the wall 10 is biased towards the detent 19. By pushing on the delimited area of the locking device 15, i.e., the lever 21, the catch is retracted, so that the connection between the lid 14 and the wall 10 is released. To achieve a better seal, it may be advantageous if the leaf spring 22 is backed by a wall portion 14c, sloped at an angle in Fig. 2, which serves on the one hand as a stop to limit the push movement of the locking lever and on the other hand as a cover baffle to cover the gap 24 between the locking device and the lid 14. All other gaps are advantageously covered by making the angled locking lever relatively wide so that it covers the gaps. Closing and locking the lid 14 is likewise a one-handed push-down operation, namely by pressing down on the top of the lid 14 or on the front edge of the angled locking lever 15, i.e., outside of the delimited area of the lever 21. As a result of pushing

down, the catch 20 under the biasing force of the leaf spring 22 will snap into the locked position behind the detent 19, as shown in Fig. 2.

5 As a further convenience feature, to cause the lid 14 to lift up automatically from the walls 7, 10 and 11, it is advantageous if the lid 14 is not removable from the box 1, but is connected to the rear wall of the box by a hinge arrangement with a pivot axle 25. To close off the hinge gap 28, the hinge arrangement may include a gap-closing strip 26 wrapped around to the top and a strip 27 projecting downwards. A different hinge arrangement 25'-27' is shown in Fig. 2A. It consists of an integrally formed projection 25' of the lid 14 that is pivotally supported on an axle 26' held in the projection 27' of the rear wall 11. With the hinged lid, an elastic element such as a pop-up spring can be conveniently provided, so that the lid will open at least partially after it has been unlocked by push-down action as described above. In principle, this could be achieved by at least one angular spring in the hinge arrangement 25-27, but in view of the short lever arms formed by the legs of the angular spring, the latter would have to be designed for sufficient strength to lift the lid 14, thereby creating the risk that the lid will pop up with violent jolt, which would be an inconvenience or could even cause the box 1 to tip over if it is relatively tall in relation to the footprint area.

It is therefore preferred if the elastic element is arranged at the opposite side of the lid 14 from where the hinge arrangement 25-27 is located, so that the elastic element cooperates with a longer lever arm (in relation to the hinge axle 25). It is particularly advantageous if the elastic element is arranged about in the middle on the

opposite side from the hinge arrangement 25-27, i.e., in the area of the locking device 15, which is likewise located in a centered position. However, the invention is clearly not limited to a centered arrangement of the locking device 15, although the centered arrangement obviously contributes to the ease of using the box, because the alternative would be to have either two locking elements arranged laterally, or a single actuating element would have to be provided for symmetrically arranged locking devices. A leaf spring 29 performing the function of the elastic element just mentioned is indicated schematically in Fig. 2 and illustrated more clearly in Fig. 3.

Fig. 3 illustrates a view at the front wall 14d of the lid 14. As indicated, the lid 14 has at least one slot 30 (the illustrated embodiment has two) to hold the leaf spring 29 that constitutes the elastic element. The elastic element for lifting the lid 14 can in some cases include an additional spring or an additional elastic element such as the previously mentioned elastic seal that is squeezed against the rim 3a (Fig. 2) and could obviously contribute to the lifting force on the lid 14 when the locking device 15 is released.

The slots 30 are deep enough, and the leaf spring 29 is dimensioned appropriately that it can at least partially recede into the slots 30 when the lid 14 is closed and locked on the main part of the box 1. If the slots 30 are made shorter, the spring 29 will give way by bending elastically. The installation of the spring 29 by insertion into the slots 30 is a particularly simple operation from a manufacturing point of view. As is evident, however, the spring 29 could be made in an

analogous manner as described above for the spring 22,
namely as a flat material portion that would be integrally
formed on the lid 14 and connected to the latter through an
elastic hinge constituted by a thinned-down portion
5 (analogous to element 23).

Although a two-armed angled lever mounted on the lid 14 is
preferred as a locking device 15, a simple locking lever is
also conceivable, e.g., of the kind described below in the
context of Fig. 5. Another configuration will now be
described based on Figures 4A and 4B. Elements performing
identical functions are identified by the same reference
numbers as in the previously discussed Figures. For parts
performing merely similar functions, a suffix letter or
10 prime symbol is added to the number.

Analogous to the previously discussed arrangements, Fig. 4A
also shows a catch lever 16a that swivels on an axle 17 and
has a catch 20 engaging a detent 19. The lever is biased
clockwise into a locked condition by the elastic force of a
rubber cushion 22a pushing against a lever 21'. As the
lever 21' is too short to be used for an easy release of
the lock, the box is opened by means of a kind of key,
whose shape is illustrated more clearly in Fig. 4B. The
20 key 31 consists of a spring material and has a
substantially straight actuator portion 31a with a spring
portion 31b set at an angle.

As shown in Fig. 4B, the catch lever 16a has a recess 32 in
30 which an insertion slot 33 is formed for the key 31. As
the key 31 is inserted in the slot 33 without using force,
the lateral arms 31c of the key will be stopped by the rim
of a narrower portion 33a of the slot 33, so that the key
is seated in the slot 33 but not causing the lock to

release. This condition is shown in Fig. 4A. However, if the elastically resilient key 31 is pushed forward from the narrow part 33a to the wider part 33b of the slot and then pushed down into the wider part 33b of the slot 33, the bottom end of the key will meet the front wall 14d of the lid 14. Pressing down further on the top part of the key 31 will cause a resilient force to act against the catch lever 16a, releasing the engagement between the elements 19 and 20.

In the embodiment of Fig. 5, the delimited area for releasing the lock is designed as a push button 21b acting on a lever 21c that extends below the surface 14a and is hinged on an axle 17. The lever 21c is connected to the catch lever 16 as part of an angled two-armed lever. The push-button 21b is attached to a shank 21e, for example through a releasable threaded connection. The shank 21e has a flange-like foot 21d seated in a recess of the lid 14. The elastic element for the locking action of the angled lever 16, 21c is constituted by a leaf spring 22b that is inserted in a slot 34 of a projection 35 of the lid 14 and held in place in any suitable way, e.g., by an appropriately press-formed shape as shown in Fig. 5.

Numerous modifications are conceivable within the scope of the invention. For example, a key of the kind illustrated in Fig. 4B could be used to establish a connection between two independently movable levers, i.e., the catch lever and a push-down lever, so that the lid will not immediately spring open if the push-down lever is touched accidentally, because the tilt movement of the push-down lever will not be transmitted to the catch lever unless the key is in the unlocking position in the wider part 33b of the slot. Only when the key is in the unlocking position will the movement

Furthermore, while the illustrated examples are based on the engagement between a catch lever and a detent, any other form of releasable catch-hold may be used.

Furthermore, while the illustrated examples are based on the engagement between a catch lever and a detent, any other form of releasable catch-hold may be used.

PATENT CLAIMS

1. Container (1) for storing a plurality of laboratory devices (2), comprising a storage compartment surrounded by walls (7, 8, 10, 11) and accessible from above through an opening (1a), a lid (14) to close the storage compartment, as well as a locking device (15) releasable by a push action and operable to lock the lid (14) to at least one of the walls (10); characterized in that the locking device (15) comprises a lever (16) pivoted on a fulcrum axle (17) and connected to a catch element (20) that engages a detent (19) on at least one of the walls (10), the locking device having a delimited area (21, 21b, 31a) from where an applied pushing force is transmitted to the lever (16) which, as a result of said force, directly unlocks the lid (14) from the wall (10); and further characterized in that a pushing force applied in the same direction in an area adjacent to the delimited area (21, 21b, 31a) and possibly extending beyond the locking device (15) over the lid (14) will indirectly cause the lever (16) to be moved into the locking position and will thereby effect a locked engagement between the wall (10) and the lid (14).

2. Container according to claim 1, characterized in that the lever (16) is configured as a two-armed lever pivotally supported in the border area of the lid, one of the arms carrying the catch element (20) and the other arm (21, 21c) serving to directly transmit the applied pushing force to the lever (16).

3. Container according to claim 2, characterized in that the other arm of the two-armed lever extends above the lid (14) and forms the delimited area functioning as a push lever (21).
- 5
4. Container according to claim 1, characterized in that the locking device (15) is arranged in a centered position, particularly at the lid (14).
- 10
5. Container of claim 1, characterized in that the lever (16) is force-biased by an elastic element (22, 22a, 22b) in the direction of engagement of the two catch-lock elements (19, 20).
- 15
6. Container according to claim 5, characterized in that the elastic element is a leaf spring (22, 22b) connected to the lid (14).
- 20
7. Container according to claim 6, characterized in that the leaf spring (22) is formed as a flat portion out of the lid material, hanging together with the lid (14) through a material connection (23) of reduced thickness.
- 25
8. Container according to claim 7, characterized in that the leaf spring (22) and the remaining gap against the rest of the lid are at least partially covered on the outside by a lever (16, 21) of appropriately wide dimensions.
- 30
9. Container according to claim 1, characterized in that at least one elastic element (29) is provided to pop the lid (14) at least partially open when pushing on the locking element (15, 15a).

10. Container according to claim 1, characterized in that the lid (14) is connected through a hinge device (25-27, 25'-27') to one of the walls (11).
11. Container according to claim 9 and claim 10, characterized in that the elastic element (29) is arranged in an area on the opposite side of the lid (14) in relation to the hinge device (25-27, 25'-27').
12. Container according to claim 11, characterized in that the elastic element (29) is arranged at a substantially centered location opposite the hinge device (25-27, 25'-27').
13. Container according to claim 9, characterized in that the lid (14) has at least one seating slot (30) to hold a leaf spring that forms at least part of the elastic element (29).
14. Container according claim 1, characterized in that a sealing arrangement is provided between the opening (1a) of the storage compartment and the lid (14).
15. Container according to claim 14, characterized in that the sealing arrangement is configured at least in part with rims (10a, 14b) that overlap each other in the manner of labyrinth baffles on the lid (14) and on the walls (7, 10, 11) delimiting the access opening (1a).
16. Container according to claim 1, characterized in that at least one locking device (6, 6a) is provided in the area of the access opening (1a) to lock a carrier (3, 3') that is designed to be set into the storage

5

- 10

18. Container according to claim 1, characterized in that two opposite walls, in particular a wall (8) and the lid (14) have recesses (13) and projections (12) of complementary shape adapted for secure stacking of two or more containers (1) on top of each other.

Summary

Container with a locking device that is releasable by push-down action

5

A container (1) for storing a plurality of laboratory devices has a storage compartment that is surrounded by walls (7, 8, 10, 11), is accessible from above through an opening (1a), and can be closed by a lid (14). At least one of the walls (10) and the lid (14) are connectable by a locking device (15) that can be released as well as locked by using only one hand to apply a pushing force. The locking device (15) has a lever (16) with a catch element (20) engaging a detent (19). Pushing on a delimited area (21) releases the locking device (15), while pushing outside of the delimited area will cause the locking device to become engaged.

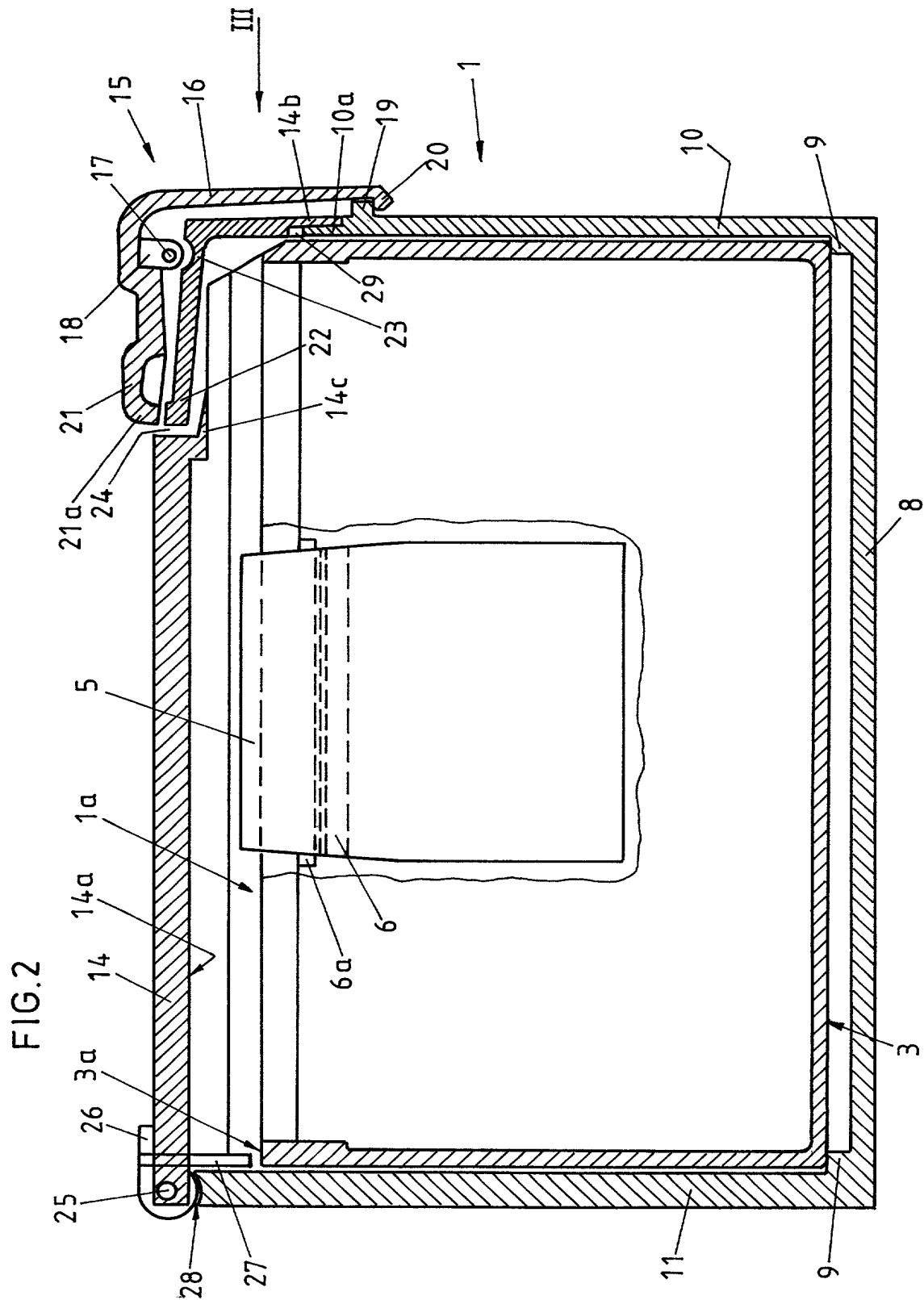
(Fig. 2)

TITLE: CONTAINER WITH A CLOSURE THAT CAN BE
PRESSURE-RELEASED

INVENTOR(S): ROLAND DURNER ET AL

APPLICATION SERIAL No: 032498-009

SHEET 2 of 5



TITLE: CONTAINER WITH A CLOSURE THAT CAN BE PRESSURE-RELEASED

INVENTOR(S): ROLAND DURNER ET AL

APPLICATION SERIAL NO: 032498-009

SHEET 3 of 5

FIG. 3

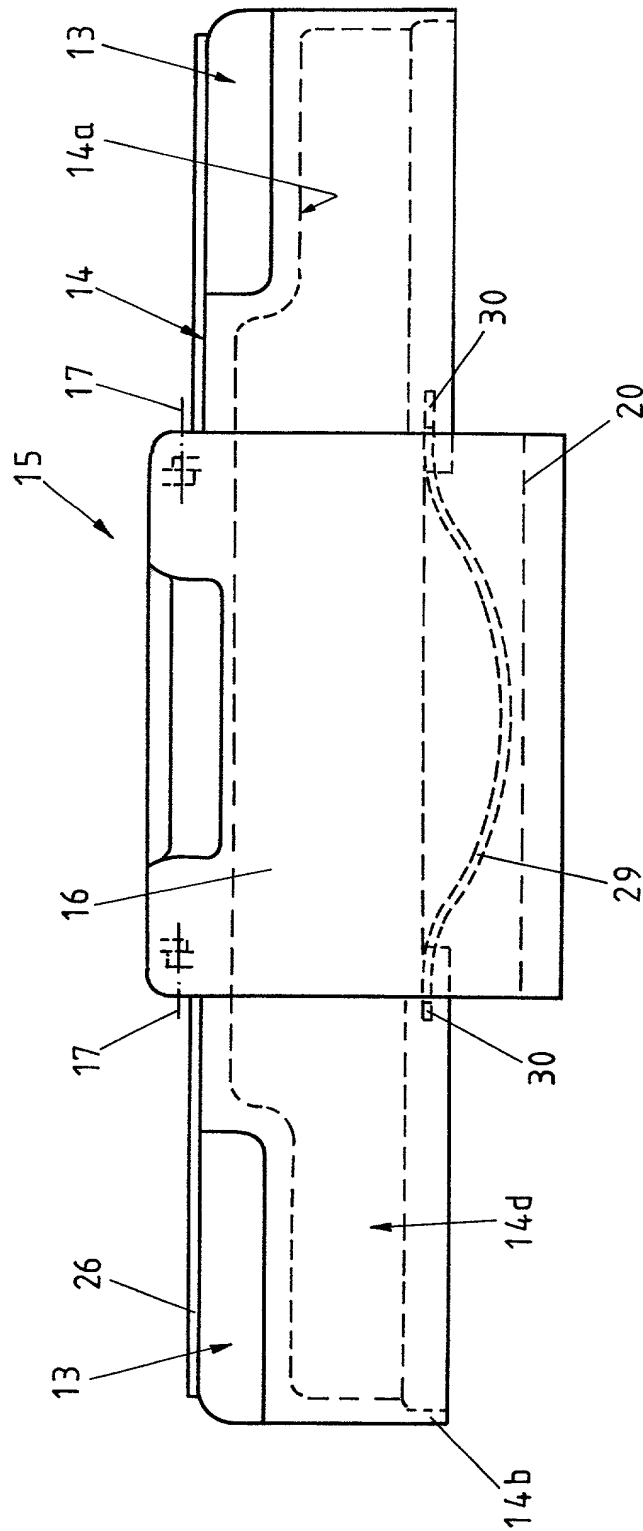


FIG. 2A

09/831640

FIG. 4A

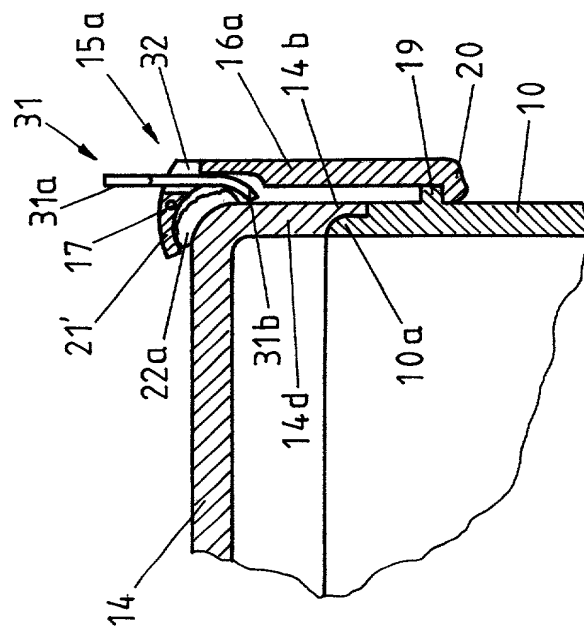
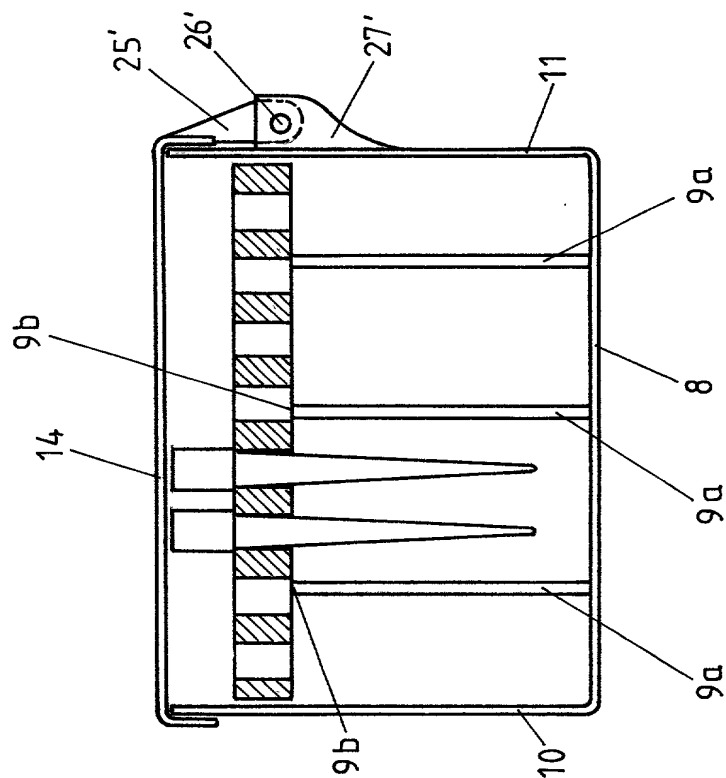


FIG. 2A



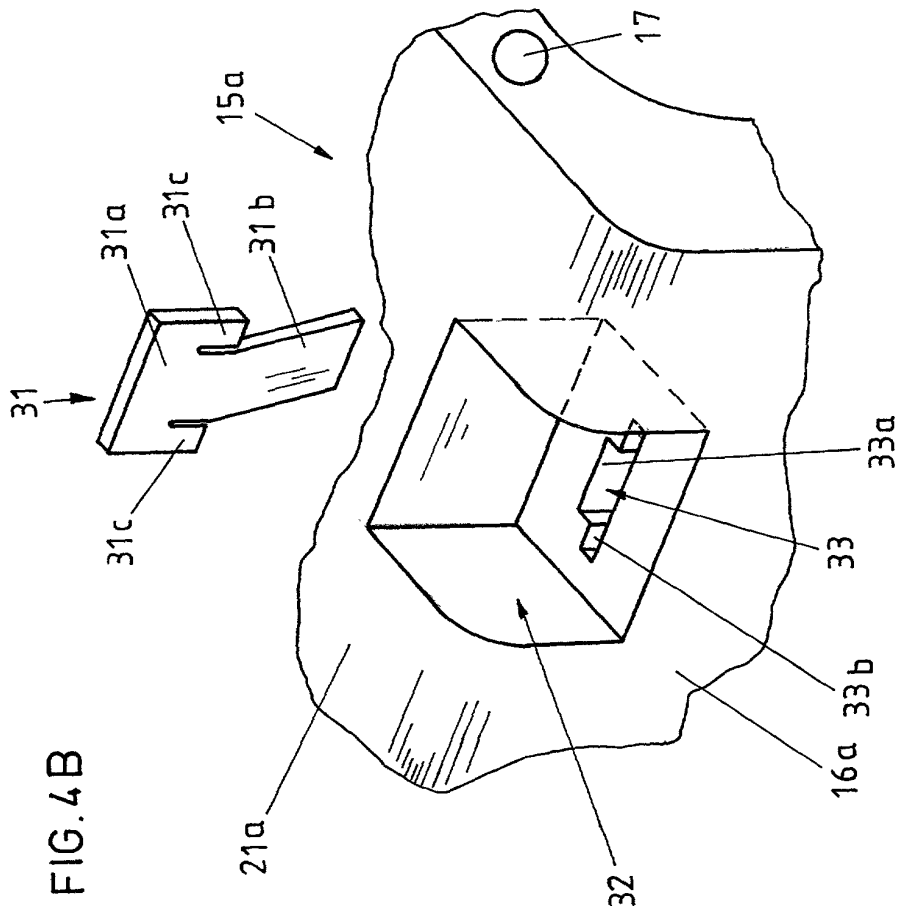
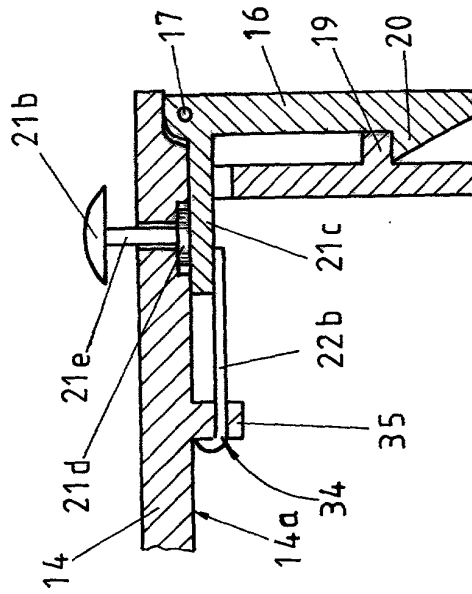


FIG. 5



COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY
(Includes References to Provisional and PCT International Applications)

Attorney's Docket No.

032498-009

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

CONTAINER FOR LABORATORY DEVICES

the specification of which (check only one item below):

☐ is attached hereto.

☐ was filed as United States application

Number _____

on _____

and was amended

on _____ (if applicable).

☒ was filed as PCT International application

Number PCT/IB99/01821

on 11 November 1999

and was amended

on 05 January 2001 (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a)-(e) of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. §119:

COUNTRY (If PCT, indicate "PCT")	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 U.S.C. §119
German	198 32 165.0	12 November 1998	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

(Application Number)

(Filing Date)

(Application Number)

(Filing Date)

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY (CONT'D)
(Includes Reference to Provisional and PCT International Applications)

Attorney's Docket No.

032496-009

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose to the Office all information known to me to be material to the patentability as defined in Title 37, Code of Federal Regulations §1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. §120:

U.S. APPLICATIONS		STATUS (check one)		
U.S. APPLICATION NUMBER	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
PCT APPLICATIONS DESIGNATING THE U.S.				
PCT APPLICATION NO.	PCT FILING DATE	U.S. APPLICATION NUMBERS ASSIGNED (if any)		
PCT/IB99/01821	11 November 1999			

I hereby appoint the following attorneys and agent(s) to prosecute said application and to transact all business in the Patent and Trademark Office connected therewith and to file, prosecute and to transact all business in connection with international applications directed to said invention:

William L. Mathis	17,337	Eric H. Weisblat	30,505	Bruce T. Wieder	33,515
Robert S. Swecker	18,885	James W. Peterson	26,057	Todd R. Walters	34,041
Platon N. Mandros	22,126	Terence Smock Rea	31,427	Rehmi S. Jiffions	31,979
Barton S. Duffett, Jr.	22,030	Robert E. Krebs	25,865	Harold K. Brown III	36,341
Norman H. Stepano	22,716	William C. Rowland	30,858	Allen R. Baum	36,086
Ronald L. Grudziecki	24,920	T. Gene Dillahunty	25,423	Steven M. duBois	35,023
Frederick G. Michaud, Jr.	26,002	Patrick C. Keane	32,858	Brian P. O'Shaughnessy	32,747
Alan E. Kopecki	25,813	B. Jefferson Boggs, Jr.	32,344	Kenneth E. Leffler	36,975
Ragis E. Sharer	26,999	William H. Benz	25,932	Fred W. Hathaway	32,236
Samuel C. Miller, III	27,360	Peter K. Skiff	31,917	Wendell L. Weinstein	34,456
Robert G. Minkal	28,521	Richard J. McGrath	29,195	Mary Ann Dillahunty	34,576
George A. Hovanec, Jr.	28,221	Matthew L. Schneider	32,814		
James A. LaBarre	28,632	Michael G. Savage	32,596		
E. Joseph Gess	28,510	Gerald F. Swiss	30,113		
R. Danny Huntington	27,903	Charles P. Wistand III	33,096		

21839

and:

Address all correspondence to:



21839

Patrick C. Keane
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, Virginia 22313-1404

Address all telephone calls to: Patrick C. Keane at (703) 836-6620.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY (CONT'D)
(Includes Reference to Provisional and PCT International Applications)

Attorney's Docket No.

032498-009

10 FULL NAME OF SOLE OR FIRST INVENTOR Roland DURNER		SIGNATURE <i>Roland Durner</i>		DATE May 9, 2001
RESIDENCE 1/150 Station Street, Carlton 3053, Victoria, Australia <i>ANX</i>		CITIZENSHIP CH		
POST OFFICE ADDRESS 1/150 Station Street, Carlton 3053, Victoria, Australia				
20 FULL NAME OF SECOND JOINT INVENTOR, IF ANY Matthias GIETENBRUCH		SIGNATURE <i>Matthias Gietenbruch</i>		DATE May 14, 2001
RESIDENCE Oberdorfstrasse 30, CH-8107, Buchs, Switzerland <i>CHX</i>		CITIZENSHIP CH		
POST OFFICE ADDRESS Oberdorfstrasse 30, CH-8107, Buchs, Switzerland				
FULL NAME OF THIRD JOINT INVENTOR, IF ANY		SIGNATURE		DATE
RESIDENCE		CITIZENSHIP		
POST OFFICE ADDRESS				
FULL NAME OF FOURTH JOINT INVENTOR, IF ANY		SIGNATURE		DATE
RESIDENCE		CITIZENSHIP		
POST OFFICE ADDRESS				
FULL NAME OF FIFTH JOINT INVENTOR, IF ANY		SIGNATURE		DATE
RESIDENCE		CITIZENSHIP		
POST OFFICE ADDRESS				
FULL NAME OF SIXTH JOINT INVENTOR, IF ANY		SIGNATURE		DATE
RESIDENCE		CITIZENSHIP		
POST OFFICE ADDRESS				
FULL NAME OF SEVENTH JOINT INVENTOR, IF ANY		SIGNATURE		DATE
RESIDENCE		CITIZENSHIP		
POST OFFICE ADDRESS				
FULL NAME OF EIGHTH JOINT INVENTOR, IF ANY		SIGNATURE		DATE
RESIDENCE		CITIZENSHIP		
POST OFFICE ADDRESS				